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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,560	11/08/2001	Paul L. Valint JR.	P02785d1	8074

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EXAMINER
SELLERS, ROBERT E

ART UNIT	PAPER NUMBER
1712	4

DATE MAILED: 04/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/005,560	Applicant(s) VALINT ET AL.	
	Examiner Robert Sellers	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 November 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The specification on page 12, lines 5-7; page 18, lines 23-26 and page 21, lines 13-14 describes the claimed copolymer of azlactone-functional monomer of the formula which forms a hydrophilic reactive polymer. The comonomers are disclosed on page 11, lines 23-26 and page 13, lines 12-21.

The claimed species of lactams and poly(alkylene oxides) are not clearly defined in the absence of the source of copolymerization with the azlactone-functional monomer. Since the copolymerization proceeds via an addition polymerization mechanism, the lactam should be limited to N-vinylpyrrolidinone as set forth on page 11, line 24 which affirmatively denotes the polymerizable vinyl group. The specification provides no indication that lactams other than N-vinylpyrrolidinone possess ethylenic unsaturation and are reactive with the ethylenic unsaturation on the azlactone-functional monomer via addition polymerization.

There is no declarative denotation of the ethylenic unsaturation on the poly(alkylene oxide) enabling addition polymerization with the ethylenic unsaturation of the azlactone-functional monomer. Page 11, lines 24-25 identifies only methoxypolyoxyethylene methacrylates as a poly(alkylene oxide) containing the methacrylate moiety capable of addition polymerization with the ethylenic unsaturation of the azlactone-functional monomer. There is no disclosure that poly(alkylene oxides) other than methoxypolyoxyethylene methacrylates have ethylenic unsaturation which addition polymerizes with the azlactone-functional monomer.

The replacement of "lactams" with "N-vinylpyrrolidinone" as well as "poly(alkylene oxide)" with "methoxypolyoxyethylene methacrylate" in claim 26, lines 2 and 3, would resolve this issue.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 26 is rejected under 35 U.S.C. 102(b) as being anticipated by Lai et al. Patent No. 5,352,714.

Lai et al. (col. 9, Example 2) shows a copolymer comprising 30 parts by weight of N,N-dimethylacrylamide (col. 9, line 28, DMA and line 45) and 5 parts by weight of 2-vinyl-4,4-dimethyl-2-oxazoline-5-one (col. 9, line 38, VDMO and line 56) per 110 parts by weight of the monomer mixture. VDMO is a species of the claimed azlactone-functional monomer of the formula according to page 20, lines 4-5 of the specification.

Claim 26 is rejected under 35 U.S.C. 102(b) as being anticipated by European Patent No. 392,735.

European '735 (page 18, Example 3) shows a copolymer prepared from 55.4 mole percent of methylene-bisacrylamide (0.188 mole/0.339 total mole of monomers) and 44.6 mole percent of 2-vinyl-4,4-dimethylazlactone (page 17, line 46, VDM; 0.151 mole/0.339 total mole of monomers). According to page 5, line 47, " 'azlactone' means 2-oxazolin-5-one groups." Therefore, 2-vinyl-4,4-dimethylazlactone is another designation for 2-vinyl-4,4-dimethyl-2-oxazolin-5-one which is the VDMO espoused on page 20, lines 4-5 of the specification.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Engler et al.

Engler et al. (col. 15, Example 3) shows a cpolymer of isooctylacrylate, 10% by weight of acrylic acid as a modifying monomer (col. 4, lines 49-60) and 4% by weight of 2-ethenyl-4,4-dimethyl-1,3-oxazolin-5-one (i.e VDMO based on the formula depicted in col. 3, lines 21-41 wherein R^9 is a single bond).

The claimed lactam, acrylamide or hydroxyalkyl methacrylate comonomer is not exemplified. The modifying monomer of patentees includes acrylamide, N-substituted acrylamides, hydroxyalkylacrylates and N-vinylpyrrolidinone (col. 4, lines 49-60).

It would have been obvious to use the acrylamide, N-substituted acrylamides, hydroxyalkylacrylates or N-vinylpyrrolidinone disclosed in Engler et al. as the modifying monomer exemplified by acrylic acid since they are equivalent modifying monomers recognized in the reference (MPEP § 2144.06, Substituting Equivalents Known for the Same Purpose).

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent No. 338,656.

European '656 (page 8, lines 39-58, Table 2) shows a copolymer derived from 2% by weight of ethylene glycol dimethacrylate as a auxiliary modifier (page 5, lines 42-46) and 3-5% by weight of 2-vinyl-4,4-dimethyl-2-oxazolin-5-one (VDMO according to page 7, line 15).

The claimed hydroxyalkylacrylate comonomer is not exemplified. Page 5, lines 42-46 sets forth the use of hydroxyethyl methacrylate as an auxiliary modifier along with the exemplified ethylene glycol dimethacrylate.

It would have been obvious to employ the hydroxyethyl methacrylate disclosed in European '656 as the auxiliary modifier based on the teaching in the reference that either monomer modifies the copolymer to impart tear and tensile strength (page 5, lines 38-41 and MPEP § 2144.06, Substituting Equivalents Known for the Same Purpose).

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Robert Sellers
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rs
3/27/03